

## **Claims**

1. An isolated nucleic acid molecule as set forth in SEQ ID NO:1 comprising a polynucleotide sequence encoding full length CCII, or a fragment thereof in possession of the same biological functions.
2. The isolated nucleic acid molecule of claim 1 which is a polynucleotide sequence fragment as set forth in SEQ ID NO:2 encoding the full-length CCII .
- 3.The CCII or a fragment thereof in possession of the same biological activity, which is encoded by the isolated nucleic acid molecule of claim 1 or a fragment thereof having the same biological functions.
4. A recombinant expression vector comprising the isolated nucleic acid molecules of claim 1 or 2, or a fragment thereof having the same biological functions.
5. A host cell transformed with the recombinant expression vector of claim 4, which is able to express CCII, or the fragment thereof in possession of the same biological activity.
6. A method for producing CCII of claim 3, comprising the steps of:
  - i) Transforming a suitable host cell by the recombinant expression vector of claim 4;
  - ii) Culturing the host cell in suitable culture medium and under appropriate culture conditions;
  - iii). Separating and purifying proteins of interest from the culture medium or cells.
7. Use of CCII prepared according to the method of claim 6 in manufacture of a medicament for treating and/or preventing RA.
8. A pharmaceutical composition for treating and/or preventing osteoarthritis and RA, containing therapeutically effective amounts of CCII prepared according to the method of claim 6, and

optionally, a pharmaceutically-accepted vehicle.

9. A food or beverage composition, which is characterized by containing a certain amount of CCII prepared according to the method of claim 6.

10. A food additive composition containing a certain amount of CCII prepared according to the method of claim 6.

11. A method for treating and/or preventing RA, including the administration of nucleic acid molecules of claim 1 or a fragment thereof in possession of the same biological functions, to the subject in need thereof.